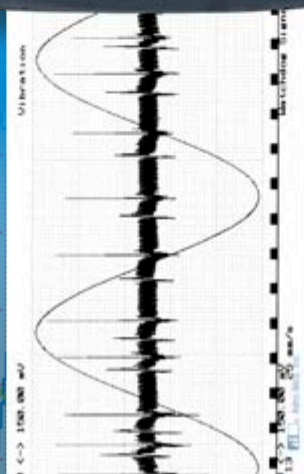


# DASH 2EZ+

HAND-HELD DATA ACQUISITION RECORDER



- Compact hand-held design
- 5.7-inch color touch-screen display
- Record two channels at sample rates up to 40 kHz per channel
- Internal, rechargeable battery for true portability
- Built-in 3.1-inch chart recorder



 **Astro-Med, Inc**  
TEST & MEASUREMENT PRODUCT GROUP

Measurement has never been this easy

# DASH 2EZ+

Astro-Med has taken its popular Dash 2EZ two-channel recorder and added so much capability, we call it the Dash 2EZ+! We increased the frequency response to 8 kHz, increased the A/D resolution to 14 bits, increased the chart speed to 25 mm/sec, added Ethernet networkability along with USB 2.0, and improved the user interface to make it even easier to use!

With a built-in 5.7-inch color touch-screen display for waveform viewing, CompactFlash for capturing data, and a built-in chart recorder for printing real-time or captured data, the Dash 2EZ+ is the ideal hand-held troubleshooting and maintenance tool. Ideal for paper mills, chemical plants, steel mills, power plants, automotive and other demanding applications, the Dash 2EZ+ is ready to go wherever you go.

## Real-time Waveform Display

The Dash 2EZ+ has a 5.7-inch color touch-screen display for viewing waveforms in real-time. This high resolution display provides remarkable clarity, and is fully customizable, allowing channels to be viewed side-by-side or overlapped for measuring phase relationships. A meter function provides a numeric readout of your data simultaneously with waveform data.

The Dash 2EZ+ lets you review captured data right on the screen, giving you immediate access to critical information. On-screen cursors provide quick and accurate information, eliminating the need to approximate measurements. Data capture review also lets you expand or compress captured data so you can see the data exactly as you want.



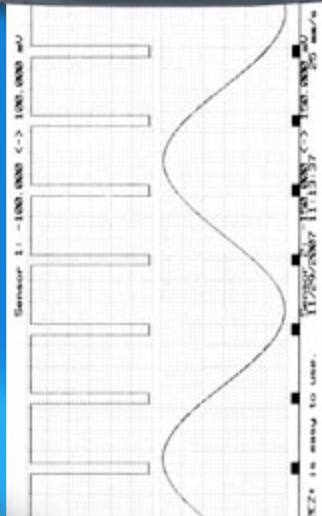
## Capture Data Directly to CompactFlash®

The Dash 2EZ+ saves data directly to off-the-shelf CompactFlash memory cards at sample rates of up to 40 kHz per channel. It comes standard with a 128 MB CF card for a complete, out-of-the-box solution.

The Dash 2EZ+ accepts CompactFlash cards up to 2 GB, allowing multiple or long term data captures.







## Real-time Strip Chart

The Dash 2EZ+ has an integral 3.1-inch thermal recorder for printing real-time and captured data. This high resolution printer provides the highest quality strip chart printouts of any hand-held system available. The Dash 2EZ+ prints the time and date, chart speed, time scale and scaling information on your chart, giving you an immediate hard copy record of your data. Grids are printed simultaneously with waveform data, eliminating paper skew.

## Isolated Input Modules

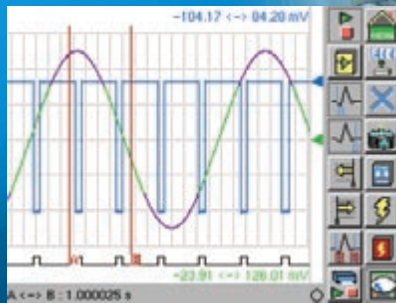
The Dash 2EZ+ accommodates two types of factory installed isolated signal modules. The HV-EZ+ isolated high voltage module accepts inputs up to 250 Vrms – perfect for power monitoring applications. The BR-EZ+ isolated DC bridge input module is ideal for connecting to most sensors, strain gages and transducers. You can choose the factory installed modules in the following configurations; two HV-EZ+, two BR-EZ+ or one of each. Built-in digital signal processing for each channel allows you to program low pass, high pass, notch and RMS filters. (Shown here with one BR-EZ+ and one HV-EZ+ module.)



## “Go Anywhere System”

The Dash 2EZ+ contains an internal rechargeable battery and integrated chart recorder that provide you a truly portable solution that can handle any application you choose, including:

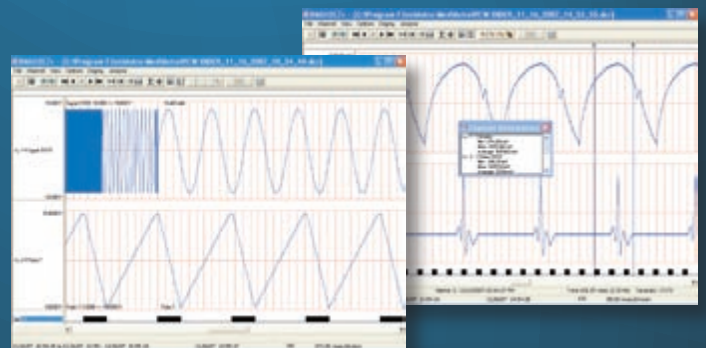
- Automotive maintenance
- Power monitoring
- Shock and vibration testing
- Metal mill maintenance
- DC drive monitoring
- Non-destructive testing



## Free AstroVIEW X PC-Based Review Software

The Dash 2EZ+ includes AstroVIEW X software for your computer. This PC based analysis software allows you to view captured data on your screen, and includes cursor measurements, a binary format conversion tool and filtering capability.

AstroVIEW X easily uploads your data to your PC via Ethernet or USB 2.0.



# Specifications

COLOR DISPLAY		DATA ACQUISITION RECORDING	
Type	Color TFT LCD	Recording Medium	CompactFlash (CF) card
Viewing Area	5.7-inch (diagonal)	Maximum Sample Rate	40,000 samples/sec per channel
Resolution	320 x 240 (QVGA)	Minimum Sample Rate	1 sample/min per channel
Touch	Full screen, resistive	Total Capacity	Determined by CF card (typically 128 MB to 2 GB)
SIGNAL MODULES		Header	Information on units, range, sample rates saved with data
Maximum Modules	2 (factory installed)	Events	Standard event input captured with waveforms
Maximum Waveforms	2 (one waveform per module)	Maximum Record	Determined by CF card (1 billion sample period maximum)
A/D Sample Rate	40 kHz per channel	Time Stamp	Time and date automatically saved with data
Filters	Low pass, high pass, notch, RMS	Pre-Trigger	Selectable up to 600,000 samples
User Engineering Units	Yes	Auto Re-Arm	Allows automatic stacking of captures
Calibration	Semi-automated to external reference	TRIGGER	
ISOLATED VOLTAGE MODULE (HV-EZ+)		Trigger Types	Manual, external, periodic, clock and waveform
Type	Isolated voltage	Waveform Triggers	Level, window
Connector	Guarded banana jacks (red/black)	External Trigger	Mini phone plug, TTL (active low)
Frequency Response	DC to 4-8 kHz (attenuator/span dependent)	Trigger Logic	OR logic
A/D Resolution	14 bit	BATTERY POWER	
Max Input	250 Vrms or DC, Cat II	Battery Type	Lithium-ion (rechargeable)
Max Transient Input	±700 V (not to exceed 250 Vrms)	Charge Time	4 hours
Isolation	250 Vrms or DC, Cat II	Battery Life	1.5 hours (capturing to CF card) 60 minutes (printing at 5 mm/s)
Specified Ranges	50 mVFS to 17000 mVFS (±8500 mV attenuator) 5 VFS to 700 VFS (±350 V attenuator)	PHYSICAL	
Input Impedance	1 MΩ	Enclosure	ABS plastic
Input Coupling	DC	Dimensions	10.5" L x 8.5" W x 2.8" H (26.7 cm x 21.6 cm x 7.1 cm)
Accuracy	±0.25% of span	Weight	4.45 lbs (2.02 kg) with paper
Intrinsic Noise	<0.3% of attenuator	STANDARD EVENT INPUTS	
Zero Suppression	Up to ±5 V (±8500 mV attenuator/span dependent) Up to ±200 V (±350 V attenuator/span dependent)	Number of Inputs	1
DIFFERENTIAL VOLTAGE / BRIDGE MODULE (BR-EZ+)		Connector	Mini phone plug
Type	Isolated, differential	Input Type	TTL (active low)
Connector	Screw terminal (removable)	Response	Detects if duration >25 μsec
Frequency Response	DC to 7 kHz (spans >20 mV) DC to 4 kHz (spans ≤20 mV)	CHART RECORDING	
A/D Resolution	14 bit	Paper Width	3.1-inch
Absolute Max Input (CMV)	10 V	Resolution	200 dpi
Isolation	250 Vrms or DC, Cat II	Max Chart Speed	25 mm/s
Input Impedance	500 kΩ balanced to iso common (1 MΩ differentially)	Chart Speed Accuracy	±2%
Input Coupling	DC	Grid Width	One 60 mm or two 30 mm grids
Specified Ranges	1 mVFS to 300 mVFS (±150 mV attenuator)	Major Time Divisions	250 msec/div to 5 min/div
Accuracy	±0.25% of span (spans ≥100 mV) ±1% of span (spans <100 mV)	POWER	
Excitation Voltage	Up to 10 V @ 30 mA	Input Voltage Range	9-24 VDC (>14 VDC required for battery charging)
Excitation Accuracy	0.05 V	Power Consumption	35 W max (15 W typical with chart halted)
Intrinsic Noise	≤0.4% of attenuator (span dependent)	AC POWER ADAPTER (INCLUDED WITH UNIT)	
Zero Suppression	Up to ±90 mV (span dependent)	Input voltage	100-240 VAC
ENVIRONMENTAL		Frequency	50-60 Hz
Operating Temp	0 to 40°C (32 to 105°F)	Maximum Current	1.0 A
Operating Humidity	10% to 90% non-condensing	Output Voltage	18 VDC
PC CONNECTIVITY		Maximum Output Power	50 W
Ethernet	10/100BaseT for network connectivity and file upload to PC using AstroVIEW X	COMPLIANCE	
USB 2.0	For file upload to PC using AstroVIEW X	Safety	EN 61010-1, 2nd Edition (2001), UL 61010-1:2004, 2nd Edition CAN/CSA C22.2 No. 61010-1:2004 2nd Edition
		EMC	FCC Part 15, Subpart B, Class B; EN 61326-1:2006 Class B

CompactFlash is a registered trademark of Sandisk Corporation. Specifications subject to change.

## Other products available from Astro-Med, Inc.



**Dash 8HF: 8-channel High Frequency Recorder**  
Features 8 channels of analog inputs, data acquisition to internal hard drive at 2 MHz sample rate and 200 kHz bandwidth.



**Dash 8XPM: Power Monitoring Recorder**  
Features the capabilities of a three phase power monitor and high end data acquisition recorder in one versatile tool!



**Dash 32HF: 32-channel High Frequency Recorder**  
Up to 32 analog or digital input channels, an intuitive touch-screen interface that simplifies setup, and an Ethernet interface for data export.

**Astro-Med, Inc**  
TEST & MEASUREMENT PRODUCT GROUP

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